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CLAIMS

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What	18	CI	aım	ed	1:	ς:

- 1 1. A medical device comprising:
- 2 a substrate having openings, and
- a fibrous coating wherein at least one fiber is threaded through the opening in
- 4 said substrate.
- 1 2. The device of claim 1, wherein the fiber comprises at least one nanofiber.
- 1 3. The device of claim 1, wherein the fibrous coating is substantially mechanically
- 2 attached to the substrate.
- 1 4. The device of claim 1, wherein the substrate is selected from the group consisting of
- 2 a stent and a surgical mesh.
- 1 5. The device of claim 1, wherein the fibrous coating has at least one polymeric
- 2 component selected from the group consisting of polycaprolactone, polylactic acid.
- 3 polyglycolic acid, polydioxanone, polyanhydride, trimethylene carbonate, poly(beta-
- 4 hydroxybutyrate), poly(g-ethylglutamate), poly(DTH iminocarbonate),
- 5 poly(bisphenol A iminocarbonate), poly (ortho ester), polycyanoacrylate,
- 6 polyphosphazene, nylons, polyesters, polyethylene terephthalate, silicon-containing
- 7 polymers, elastomeric silicone polymers, polypropylene, polyolefins, polyolefin
- 8 copolymers, elastomeric polyolefins, modified polysaccharides, cellulose, chitin.
- 9 dextran, modified proteins, fibrin, casein, an adhesive polymer, collagen, and
- fibrinogen.
- 1 6. The device of claim 1, wherein the fibrous coating comprises a nanofibrous sheet.
- 1 7. The device of claim 6, wherein the nanofibrous sheet comprises polypropylene.

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pushing step further comprises:

1 2	8.	The device of claim 1, wherein the fibrous coating is attached to the substrate by at least one melted nanofiber.
1	9.	The device of claim 1, wherein the fibrous coating is attached to the substrate by at
2		least one nanofiber that has melted and mechanically attached to at least another
3		nanofiber, or the substrate.
1	10.	The device of claim 1, wherein the fibrous coating has been mechanically attached to
2		the substrate by a heating method.
1	11.	The device of claim 10, wherein the heating method is selected from the group
2		consisting of heat sealing, spot heating with a pattern of hot wires, and spot heating
3		with a laser.
1	12.	A process comprising the step of using the device of claim 1 in a medical procedure
2		comprising implantation into a living organism.
1.	13.	A method for attaching a fibrous coating to a substrate comprising the step of:
2		pushing at least a portion of the fibrous coating through at least one hole in
3		the substrate.
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1	14.	The method of claim 13 for attaching a fibrous coating to a substrate further
2		comprising the steps of:
3		adding at least one nanofiber to a fluid; and
4		passing the fluid through at least one hole in the substrate so that at least a
5		portion of a nanofiber also passes or pushes through the at least one hole in the
6		substrate.

The method of claim 13 for attaching a fibrous coating to a substrate, wherein the

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3		using a fluid jet to push at least a portion of the fibrous coating through the at
4		least one hole in the substrate.
1	16.	The method of claim 13, wherein the fibrous coating includes polypropylene fibers.
1 2	17.	The method of claim 13, wherein the fibrous coating includes polypropylene nanofibers.
1 2	18.	The method of claim 13, wherein the fibrous coating is formed by electrospinning at least one fiber onto a surface of the substrate.
1 2	19.	The method of claim 13, wherein the fibrous coating is formed using a nanofibers by gas jet method to manufacture at least one fiber directly onto the substrate.
1 2	20.	The method of claim 13, wherein fibrous coating is formed using an electrospinnable solution having a temperature sufficient to dissolve the polymer solution.
1 2	21.	The method of claim 20, wherein the polymer solution comprises polypropylene, polyolefins, or polyolefin copolymers.
1 2 3 4	22.	A method for attaching a fibrous coating to a substrate comprising the steps: providing a substrate; coating a first side of the substrate with a fibrous coating; and forcing at least one fiber through an opening in the substrate.
1 2 3 4	23.	The method of claim 22, wherein the step of forcing at least one fiber through an opening in a substrate is performed by: adding at least one fiber to a fluid to thereby form a fiber-fluid solution; and
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5		passing the fiber-fluid solution through at least one hole in an device wall
6		so that the fiber is threaded by the fluid into the at least one hole in the device wall.
1	24.	The method of claim 22, wherein the device is a stent or substrate and the substrate
2		is a stent wall or a surgical-mesh wall.
1	25.	The method of claim 22 for attaching a fibrous coating to a substrate further
2		comprising the step:
3		pulling at least a portion of the fibrous coating through at least one hole in the
4		substrate.
1	26.	The method of claim 22, wherein the step of pulling at least a portion of the fibrous
2		coating through the at least one hole in the substrate is performed by pulling a
3		substantially needle-like object through at least one hole in the substrate, wherein a
4		portion of the fibrous coating is pulled through the at least one hole by the needle-
5		like object.
1	27.	The method of claim 22, wherein the step of pulling at least a portion of the fibrous
2		coating through the at least one hole in the substrate is achieved by performing the
3.		additional steps:
4		inserting a portion of at least one substantially needle-like object through
5		the at least one hole;
3		attaching at least one nanofiber to the substantially needle-like object; and
7		withdrawing the substantially needle-like object from the at least one hole
3		so that the at least one nanofiber is pulled through the at least one hole.
Ĺ	28.	The method of claim 22 for attaching a fibrous coating to a substrate further
2		comprising the steps:
3.		applying a positively-charged fibrous coating to a first side of the substrate;
1		and

5		applying a negatively-charged fibrous coating to a second side of the
6		substrate.
1	29.	The method of claim 22, further including
2		coating a second side of the substrate with at least a second fiber;
3		wherein the fibrous coating or the at least a second fiber is contact
4		adhesive, and
5		wherein the fibrous coating and the at least a second fiber contact each
6		other so that at least a portion of the fibrous coating and the at least a second fiber
7		forms an adherent joint.
1	30.	The method of claim 22 for attaching a fibrous coating to a substrate further
2		comprising the step:
3	•	heat treating a fibrous coating, wherein the heat treatment causes at least
4		one nanofiber to melt and form an adherent joint with at least, another nanofiber,
5		or the substrate.
1	31.	The method of claim 30, wherein the heat treating step further comprises using a
2		laser, a heating element, or a combination thereof.
1	32.	A means for mechanically attaching a fibrous coating to a substrate.
1	33.	The means of claim 32 wherein the fibrous costing commisses at least a second of the s
1.	33.	The means of claim 32, wherein the fibrous coating comprises at least one nanofiber
1	34.	The means of claim 33, wherein the fibrous coating comprises a free-standing
2		fibrous polymer sheet